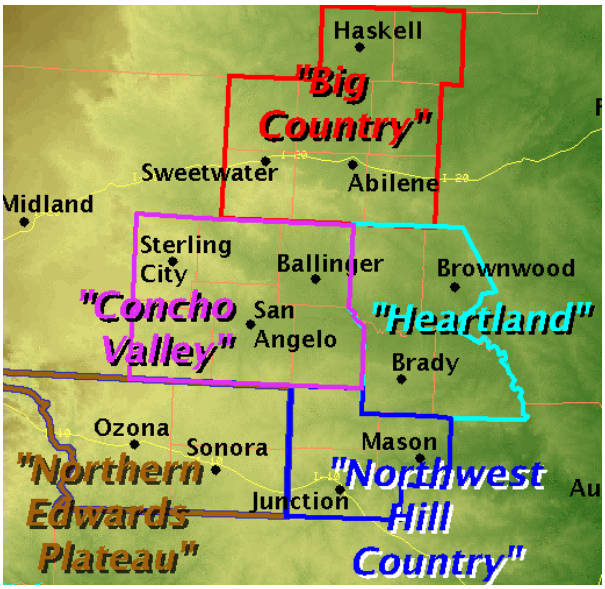
Climate Outlook for Fall 2013

Recent Weather Trends and Drought Status in West Central Texas



The background map to the left shows the geographic regions of West Central Texas which are referenced in this outlook.

With an anomalous weather event in the middle of July, heavy and beneficial rainfall occurred across the Big Country, Heartland, and Concho Valley areas. During the past month, rainfall has varied from above to below normal across the region. Figure 1 (below) shows the percent of normal precipitation, for the past 30 days ending August 26th. Precipitation has been above normal across much of the area north of a line from Albany to Lake Fort Phantom Hill to Blackwell. Rainfall amounts of more than 2 inches have occurred across this area, with scattered locations receiving more than 4 inches. For the areas south and east of Abilene, including much of the Concho Valley and Heartland, rainfall amounts have been less than 50 percent of normal during the past 30 days.

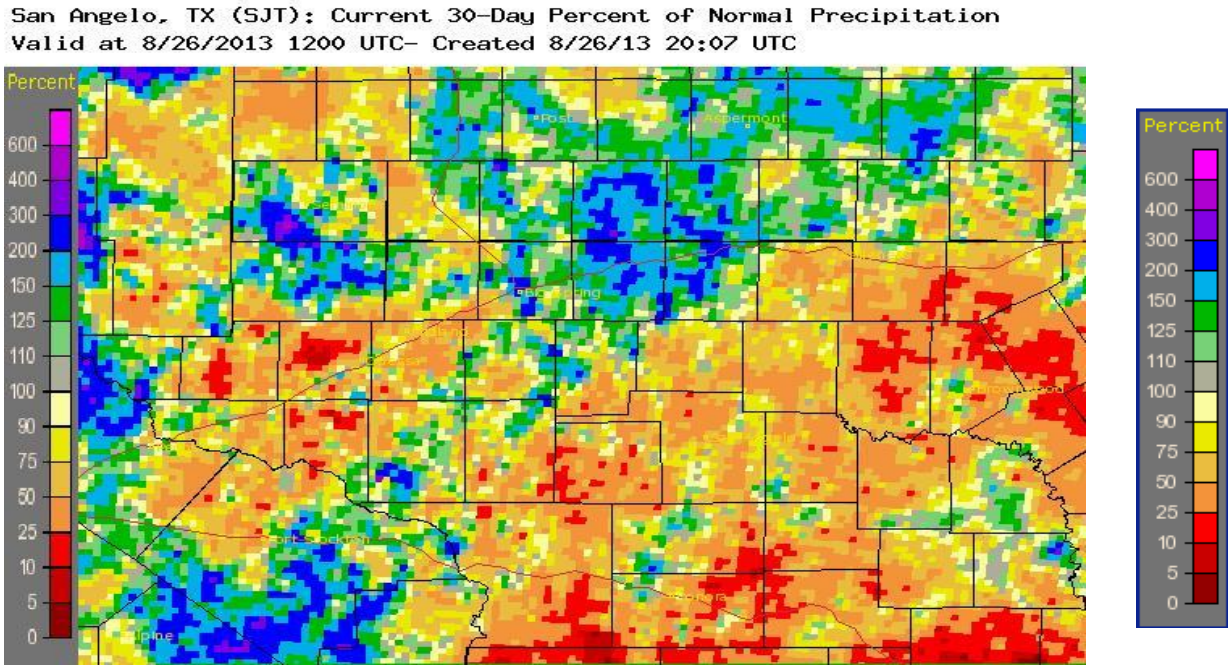


Figure 1: Percent of Normal Precipitation for the past 30 days, ending August 26.

The U.S. Drought Monitor as of August 20th, issued through the National Drought Mitigation Center, is shown in Figure 2 (below) for Texas. Despite rainfall in the past few weeks, severe to extreme drought conditions remain across much of the Big Country. Moderate drought is shown south of the Interstate 20 corridor across the Concho Valley and northern Heartland areas. Severe to extreme drought conditions are also shown across much of the southern and southeastern part of West Central Texas. The Drought Monitor takes into account short-term meteorological parameters, agricultural aspects, and the hydrological components (water levels in lakes and rivers) of the drought.

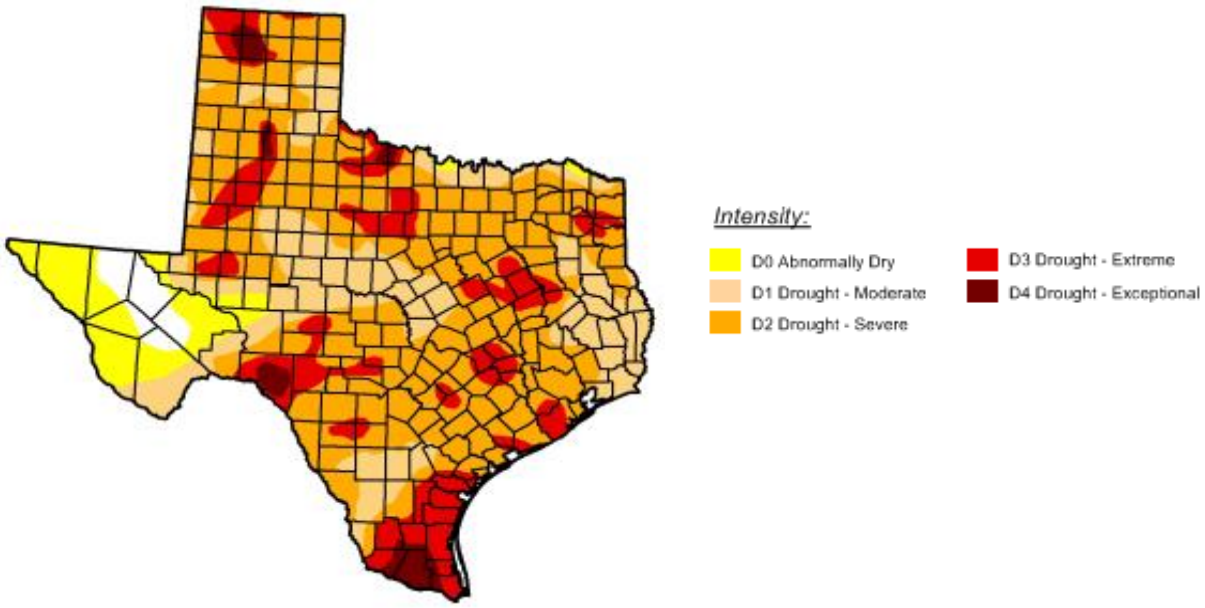


Figure 2: U.S. Drought Monitor for Texas (August 20th). Courtesy of USDA, National Drought Mitigation Center, Dept. of Commerce and NOAA.

Current ENSO Status

In the equatorial Pacific Ocean, sea surface temperatures are near average across the western and central Pacific Ocean, and cooler than average across the eastern Pacific. The current El Nino Southern Oscillation (ENSO) status reflects Neutral conditions overall. The Climate Prediction Center anticipates that Neutral conditions are most likely to continue this fall.

Climate Outlook for September-November, 2013

The 30-day temperature outlook for September (not shown), from the Climate Prediction Center (CPC or www.cpc.ncep.noaa.gov), indicates slightly enhanced probability for temperatures to average above normal across the central and western parts of West Central Texas. For eastern parts of West Central Texas, equal chances are indicated for temperatures to average above, near, or below normal.

The 90-day CPC temperature outlook for September through November (Figure 3) shows a similar pattern with slightly enhanced probability for temperatures to average above normal across western the western part of West Central Texas.

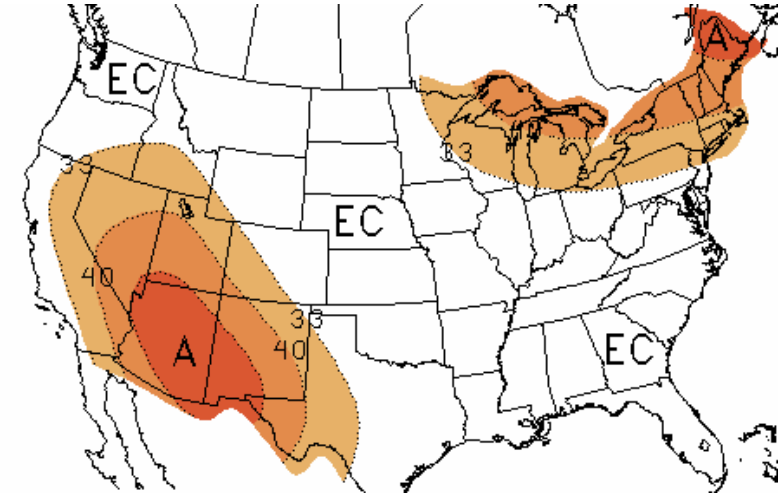


Figure 3: Climate Prediction Center 90 Day Outlook for Temperature for September through November, 2013.

The CPC 30-day precipitation outlook for September (not shown) indicates equal chances for precipitation to be above, near, or below normal across our region. The 90-day precipitation outlook for September through November (Figure 4) also shows equal chances for precipitation to be above, near, or below normal across our area.

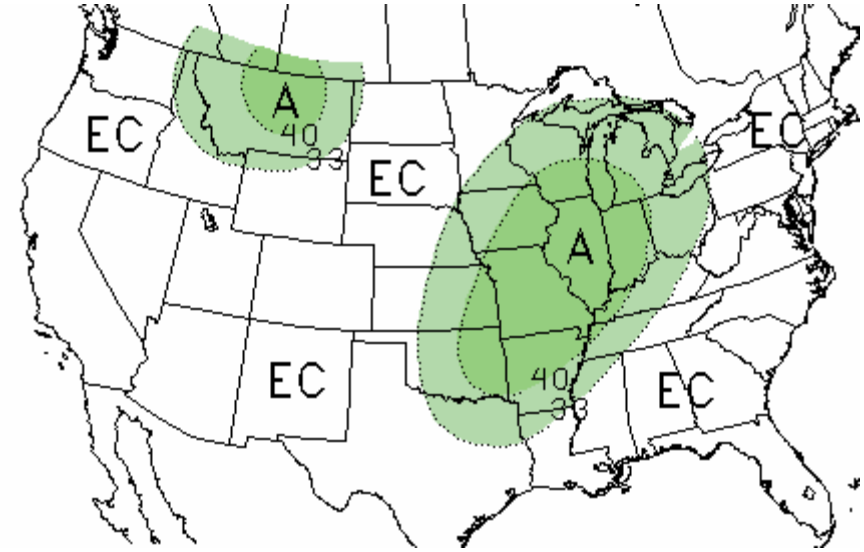


Figure 4: Climate Prediction Center 90 Day Outlook for Precipitation for September through November, 2013.

Fall Weather Patterns Affecting Temperature and Precipitation

Hot and dry conditions occur in September when upper level high pressure systems are in close proximity to our region. On occasion, these conditions can persist well into the month. Wet weather patterns can occasionally develop across West Central Texas in September and October. In September, an east or southeast flow can develop aloft and allow disturbances to move into Texas from the Gulf of Mexico. This can bring more humid conditions to our area, with increased cloud cover and scattered to numerous showers and thunderstorms. On a few occasions, the remnants of a tropical storm or hurricane have tracked into West Central Texas in September, and have brought very heavy rainfall with localized flash flooding. On average, September is one of the wettest months of the year for West Central Texas. If moisture is present in October, upper level disturbances and frontal boundaries can interact with this moisture and bring heavy rainfall.

Seasonal Drought Outlook

The latest U.S. Seasonal Drought Outlook for August 15th through November 30th, issued by the Climate Prediction Center (Figure 5), indicates that drought conditions are likely to persist across West Central Texas. Across our region, water losses from evaporation and transpiration remain high in September, especially during the first half of the month when temperatures are very warm. This increases the amount of rainfall needed to replenish soil moisture.

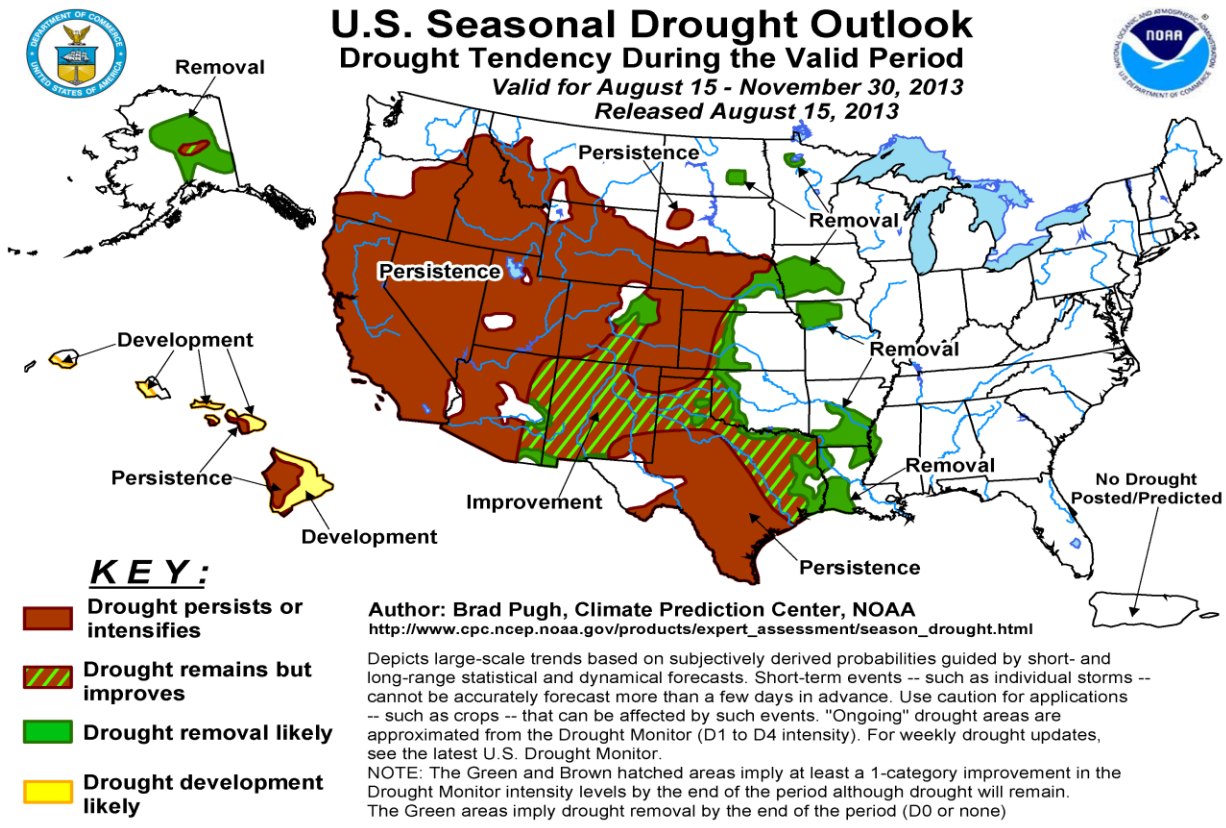


Figure 5: U.S. Seasonal Drought Outlook, valid August 15 – November 30, 2013.